REMARKS

The 5/27/10 Notice of Non-Compliant Amendment indicated that claims 3, 5, 7, 14, 16 and 30 had an improper claim status identifier as provided in the 2/12/10 Response because these claims were indicated as “Withdrawn” which is generally used for non-elected claims in response to a restriction requirement (and the 2/12/10 Response was not in response to a restriction requirement). Thus, the 5/27/10 Notice of Non-Compliant Amendment indicated that it was unclear whether these claims (3, 5, 7, 14, 16 and 30) should be canceled or not. Accordingly, claims 3, 5, 7, 14, 16 and 30 are indicated as “Previously Presented” herein so that they are examined, instead of being cancelled or withdrawn. The remainder of this Response, which addresses the substance of the 11/16/09 Non-Final Office Action, generally mimics the 2/12/10 Response which addressed the substance of the 11/16/09 Non-Final Office Action, but which was regarded as Non-Compliant.

Claims 1-37 are currently pending. Claims 38-39 have previously been withdrawn from consideration. Claims 1-37 have been rejected as being obvious under 35 U.S.C. § 103(a).

Independent claims 1, 33, and 37 and dependent claims 6, 8-13, 15, 17-18, 21-29, 31-32, and 34-36 are hereby amended. Claims 2, 4, and 19-20 are presented again without amendment. New dependent claims 40-44 and new independent claim 45 are hereby presented for consideration.

It is respectfully submitted that newly amended independent claims 1, 33, and 37, new independent claim 45, and dependent claims 2, 4, 6, 8-13, 15, 17-29, 31-32, 34-36, and 40-44 are allowable under 35 U .S.C. § 103(a) in view of the cited references for at least the following reasons.

I. REJECTION OF CLAIMS 1-37 UNDER 35 U.S.C. § 103(a)

Claims 1-37 have been rejected under 35 U.S.C. § 103(a) as being obvious in view of Novakov et al. U.S. Patent No. 6,571,103 (*hereinafter* “Novakov”) in view of Hightower et al. U.S. Patent No. 5,276,277 (*hereinafter* “Hightower”).

Novakov teach techniques for creating a wireless communication link (particularly a Bluetooth network) by a “local station” for communicating with a “mobile station,” such as a mobile phone. These techniques focus on conserving energy, *e.g.*, in order to promote the battery life of the mobile station. One technique for doing so involves the negotiation between the local station and the mobile station of the signal strength of the communication link, and in particular to reduce the signal strength to an acceptably low level in order to conserve the energy of the mobile station and/or the local station. Novakov also teach that a reduction in the signal strength of the communication link may also result in a reduced range (*e.g.*, in col. 5 lines 33-41: “The power level may be set between values of -30 dBm (range of radio channel 30 about 10 cm) and +20 dBm (about 100 mW - range of radio channel 30 about 100 m). A typical value would be about 0 dBm (about 1mW – range of radio channel 30 about 10 m) if the system is to be used within the room or the apartment. A higher value can be selected if wider ranges (*e.g.*, house and garden) are to be covered”).

Hightower teach materials that are capable of blocking selected electromagnetic signals while permitting passage of other electromagnetic signals. In particular, Hightower teach the use of these materials for confining an electromagnetic signal (such as a wireless network) to a particular area, such as an office or building, while allowing other signals to propagate unmitigated. For example, materials specially selected to block the frequency range of a wireless network may be incorporated in the walls, ceiling, floor, and windows of an office space, and may thereby confine the wireless network within the office space while permitting electromagnetic signals of other frequencies (such as those used by mobile phone networks) to permeate the office.

a. Neither Novakov nor Hightower teach the creation of a wireless network "restrictively ranged" by selecting power and/or frequency settings of driven elements.

Independent claims 1, 33, and 37 provide:

> "transmit[ting] an outbound information signal at a predetermined power and a predetermined frequency that create a transmission zone that is restrictively ranged proximate to at least a portion of [a] surface."

It is respectfully submitted that neither Novakov nor Hightower teach this technique for "restrictively ranging" the wireless network through selection of the power and frequency utilized by one or more driven elements (such as transmitters) that create the wireless network.

Novakov do not teach "restrictively ranging" the wireless network in any manner, or for any reason. The ranges noted in Novakov are not mentioned in order to suggest that the communication link is to be restricted to a desired area, but only to recommend power settings of the communication link that might provide adequate coverage of a desired volume of space. Indeed, if the design or utilization of the transmitters in Novakov were altered to cover additional range at the same power level and frequency, this alteration would be fully compatible with Novakov (or, at most, suggest the use a lower power level – not to restrict the range of the communication link, but to reduce excess power consumption in creating the communication link in order to prolong the battery life of the mobile station). By contrast, this alteration and improved range may compromise the application of the techniques in the present application, because the wireless network would present a less adequate "restricted range proximate to at least a portion of the surface."

While the teachings of Hightower are related to the range restriction of electromagnetic waves (such as may comprise a wireless network), Hightower do not teach "restrictively ranging" the wireless network according to the selection of power and/or frequency settings used by the transmitters of the wireless network. Indeed, Hightower teach nothing with regard to the nature of transmitters of electromagnetic waves, except to note that transmitters may emit different frequencies of electromagnetic radiation.

Because neither Novakov nor Hightower teach the range restriction of a wireless network through the selection of power and frequency of one or more driven elements, it is respectfully submitted that independent claims 1, 33, 37, and 45 are allowable under 35 U.S.C. § 103(a) in view of these references. Additionally, it is respectfully submitted that because dependent claims 2, 4, 6, 8-13, 15, 17-29, 31-32, 34-36, and 40-44 depend from independent claims 1, 33, and 37, these claims are also allowable under 35 U.S.C. § 103(a) in view of these references. Allowance of these claims is therefore respectfully requested.

b. Neither Novakov nor Hightower teach the creation of a wireless network that is "restrictively ranged proximate to at least a portion of a surface."

Independent claims 1, 33, and 37 provide:

> "transmit[ting] an outbound information signal at a predetermined power and a predetermined frequency that create a transmission zone that is restrictively ranged proximate to at least a portion of [a] surface."

It is respectfully submitted that neither Novakov nor Hightower teach the configuration of a driven element (such as a transmitter) for restricting the range of the wireless network proximate to a portion of a surface.

Novakov teach that adjusting the signal strength of a communication link may alter the range (*e.g.*, the radius of a substantially spherical volume of space) of the wireless network. This adjustment determines the extent to which the wireless network extends out into space from the transmitter. While this space may approximately correlate with a desired volume of space (*e.g.*, the interior of an office or a house), it is not related to any particular surface, and is not restrictively ranged with respect to any particular surface. For example, the techniques taught in Novakov are identically applied if an identically sized volume of space to be covered by the communication link is completely unbounded (such as in an outdoor garden), or is partially or wholly bounded (such as inside a building). In these scenarios, the volume of space to be filled is the same, and according to Novakov, the strength of the wireless signal is to be set the same in both locations. Indeed, while particular surfaces (*e.g.*, the walls of a cubicle or structure) may be positioned at some or all of the conceptual bounds of the desired volume of space to be filled, this collocation is wholly coincidental, and Novakov do not suggest that the strength of the communication link is to be adjusted with regard to any of these surfaces. Thus, the communication link created in Novakov is not related to any particular surface, and, moreover, is not created in order to be restrictively ranged proximate to a portion of a surface.

Hightower also do not teach restricting the range of the wireless network proximate to a surface. The only "surfaces" disclosed in Hightower in relation to the wireless network are designed to block transmission of particular electromagnetic waves through the surface, but Hightower do not relate to how far away from the surface the wireless network may extend. That is, in order to confine the electromagnetic waves to a desired volume of space (such as an office), Hightower teach the complete enclosure of the space in the disclosed blocking materials – not the restriction of the wireless network to the proximity of such surfaces. In Hightower, the volume of space in which the electromagnetic signals are to be contained may or may not be bounded by other surfaces (such as walls), but such bounding is incidental; the techniques of Hightower teach that if such surfaces are not shielded, the electromagnetic signals may (acceptably) pass through and extend as far as the power of the electromagnetic network permits.

Because neither Novakov nor Hightower teach the range restriction of a wireless network proximate to a portion of a surface, it is respectfully submitted that independent claims 1, 33, 37, and 45 are allowable under 35 U.S.C. § 103(a) in view of these references. Additionally, it is respectfully submitted that because dependent claims 2, 4, 6, 8-13, 15, 17-29, 31-32, 34-36, and 40-44 depend from independent claims 1, 33, and 37, these claims are also allowable under 35 U.S.C. § 103(a) in view of these references. Allowance of these claims is therefore respectfully requested.

c. Neither Novakov nor Hightower teach the inclusion of one or more "visual indicators" that indicate a boundary of the transmission zone.

Claims 29 and 31 provide:

> "an effective zone indicator located on the surface and configured to visually indicate a boundary associated with the transmission zone."

Similarly, claim 32 provides:

> "a plurality of effective zone indicators located on the surface and configured to visually indicate respective boundaries of the transmission zones."

It is respectfully submitted that neither Novakov nor Hightower teach this technique for indicating the range of the transmission zone of the wireless network.

The Examiner has previously rejected these claims by citing portions of Hightower including Fig. 1 and column 12, lines 54-65. However, these portions of Hightower do not teach the inclusion of visual indicators of the boundaries of a transmission zone.

Fig. 1 of Hightower shows only an office floor plan where a wireless network may be broadcast from various transmitters 18, 19, 20, 21, 22 located inside and outside of the office, and which may create various wireless networks 26, 27, 28, 29, 30. No visual indication of a boundary of any transmission zone of any wireless network is illustrated in nor taught by Figure 1. It is respectfully submitted that the Examiner might have been confused by the arrows present in Fig. 1. However, these arrows are merely included in Figure 1 to indicate the existence of the respective wireless networks created by the respective transmitters, not a boundary of a transmission of the wireless network so created.

Hightower col. 12, lines 54-65 read:

> "The indoor electromagnetic signal propagation control system 10 provides an office control system 40 to optimally control the electromagnetic environment within the enclosure defined by the office building floor 11. The office control system 40 is spatially substantially coextensive with the office enclosure A, the office enclosure B, and the

> central hall 12. In this manner, the electromagnetic environment for each office enclosure is individually designed to reduce electromagnetic interference, to secure communications, and to customize electromagnetic signal transmissions and reception within the respective bounded office space."

This portion of Hightower does not in any way relate to the presence of visual indicators that indicate the boundaries of a wireless network. It is respectfully submitted that the Examiner might have mistaken the reference to "individually designated" environments as teaching an inclusion of one or more visual indicators. However, this reference only relates to the confinement of electromagnetic signals to a particular volume of space (through the use of shielding materials) in a manner that provides an "individual" network, *e.g.*, for a resident of the office. However, this reference does not relate to the inclusion of visual indicators that indicate the boundaries of such a transmission zone.

Because neither Novakov nor Hightower teach the inclusion of one or more visual indicators that indicate one or more boundaries of the transmission zone of a wireless network, it is respectfully submitted that dependent claims 29 and 31-32 are allowable under 35 U.S.C. § 103(a) in view of these references. Allowance of these claims is therefore respectfully requested.

d. Neither Novakov nor Hightower teach the creation of a wireless network "extending outward from the surface."

Claims 40, 44, and 45 provide:

> "transmit[ting] the outbound information signal extending outward from at least a portion of the surface."

Support for these new claims may be found, *e.g.*, in Fig. 4, where the driven element 412 is integrated with one or more surfaces of a piece of furniture, and creates a transmission zone 430 extending outward from the surfaces. This configuration may be advantageous, *e.g.*, for restricting the range of the transmission zone proximate to the surface.

It is respectfully submitted that neither Novakov nor Hightower teach this technique for configuring a driven element (such as a transmitter) to create a wireless network extending outward from a portion of the surface.

Novakov do not teach that a transmitter may be positioned to transmit the communication signal "extending outward from the surface." Indeed, this configuration may be detrimental to the techniques of Novakov, where the range of the communication link is desirably maximized in order to provide maximum coverage of the communication link at any selected power level (which is desirably reduced only to conserve the battery power of the mobile station). Thus, one of ordinary skill in the art, applying the techniques of Novakov, would position the local station as far away from any surfaces as possible, in order to maximize the coverage of the communication network. Therefore, in scenarios where the electromagnetic signal created by the local station according to Novakov encounters a surface, the electromagnetic signal is likely traveling toward the surface, not extending outward from the surface. In this manner, Novakov teach away from the configuration of the transmitter to create the network "extending outward from [a] surface," as this configuration reduces the coverage of the communication link and therefore conflicts with the objectives of Novakov.

Hightower also do not teach that a transmitter may be positioned to transmit the communication signal "extending outward from the surface." Indeed, Hightower only references the location of the transmitter in the background section (at col. 2, lines 46-49) as "within the office itself, or by sources outside, but within close proximity to, the office."

Because neither Novakov nor Hightower teach the configuration of a driven element to create the wireless network extending outwardly from at least a portion of the surface, it is respectfully submitted that independent claim 45 and dependent claims 40 and 44 are allowable under 35 U.S.C. § 103(a) in view of these references. Allowance of these claims is therefore respectfully requested.

II. CONCLUSION

For at least the above reasons, the claims currently under consideration are believed to be in condition for allowance. The applicant respectfully requests withdrawal of the final rejection as premature under MPEP 706.07(c) and allowance of the presently asserted claims.

Should the Examiner feel that a telephone interview would be helpful to facilitate favorable prosecution of the above-identified application, the Examiner is invited to contact the undersigned at the telephone number provided below.

Should any fees be due as a result of the filing of this response, the Commissioner is hereby authorized to charge the Deposit Account Number 50-5088, VOCP101US.

Respectfully submitted,

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